

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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Second Application of Pacific Gas and
Electric Company for Approval of
Agreements Resulting from Its 2014-2015
Energy Storage Solicitation and Related
Cost Recovery (U39E)

A.16-04-024
(Filed April 29, 2016)

REPLY BRIEF OF STEM, INC.

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I. INTRODUCTION

Pursuant to California Public Utilities Commission (“Commission”) Rules of Practice and Procedure, Rule 13.11, and in accordance with the *Scoping Memo And Ruling Of Assigned Commissioner And Administrative Law Judge* dated July 25, 2016 (“Scoping Memo”)¹, Stem, Inc., dba Stem Energy Northern California, LLC (“Stem”) hereby submits its Reply Brief in the above-referenced proceeding pertaining to the *Second Application of Pacific Gas and Electric Company (U 39 E)* (“PG&E”) for Approval of Agreements Resulting from its 2014-2015 Energy Storage Solicitation and Related Cost Recovery, filed April 29, 2016 (“Application”).

The agreement² between Stem and PG&E (the “Agreement”) was selected in a thorough request for offers (“RFO”) process and passed the detailed scrutiny of an Independent Evaluator (“IE”). The Agreement furthers State clean air and low carbon energy policies, and is fully supported by the applicant, the Independent Evaluator, and all but one party—the Office of

¹ Scoping Memo, p. 8.

² *Behind-the-Retail-Meter Energy Storage Resource Adequacy Agreement between Pacific Gas and Electric Company (as “Buyer”) and Stem Energy Northern California, LLC (as “Seller”)*, under which Stem will provide PG&E with four (4) megawatts (MW) of resource adequacy (RA) and flexible RA on a monthly basis. See Exh. PG&E-1, *Pacific Gas and Electric Company Results of 2014 Energy Storage Solicitation Second Prepared Testimony, Public Version*, dated April 29, 2016 (“Prepared Testimony”), p. 1. The Agreement is the only BTM agreement signed by PG&E through its ES program and the only one that provides RA related to customer load reduction. *Id.* at p. 3-1

Ratepayer Advocates (“ORA”). This reply brief is accordingly limited to addressing the statements made in ORA’s opening brief.

II. DISCUSSION

Under the presiding framework for obtaining approval of a utility’s power purchase agreements, only the Commission staff, the IE, the Procurement Review Group, and non-market participants, like ORA, are permitted access to all data and other materials that are considered highly confidential. All other participants—including the counterparty to the power purchase agreement—are denied such access.

Upon review of PG&E’s and, particularly, ORA’s opening briefs, it is clear that this protected information provides much of the material relied upon by both PG&E (in support of) and ORA (in opposition to) the Agreement. Stem is thus partially disadvantaged in preparing this rebuttal, because it is denied the opportunity to review all the pertinent information on which PG&E and, to a much greater extent, ORA, rely to support their arguments—information which this Commission will, in part, base its decision. Notwithstanding this limitation, however, Stem finds that even under the non-confidential record, there is overwhelming support for the adoption of this Agreement.

Further, Stem has identified several significant flaws with ORA’s contentions. In brief: (1) ORA’s cost-effectiveness arguments are misplaced because they apply an improper definition of “cost effectiveness”, (2) the Stem Agreement is a commercial project and is not appropriate as a demonstration project, (3) ORA’s allegations regarding Resource Adequacy (“RA”) ignore actual expected market conditions, and (4) ORA ignores the Agreement’s significant benefits and the protections for ratepayers.

In total, ORA’s arguments individually attack components of the Agreement, contending that each element “alone” cannot support the Agreement’s approval,³ but ORA

³ See e.g., *Opening Brief of The Office of Ratepayer Advocates [Public Version]*, dated September 23, 2016 (“ORA Opening Brief”), p. 15 (arguing that diversity and learning opportunities cannot serve as “an independent basis” for contract approval).

completely fails to recognize that these components work on a coherent basis and, collectively considered, overwhelmingly support PG&E's and the IE's finding that the Agreement is reasonable, is beneficial to ratepayers, and should be approved by this Commission.

A. ORA's Arguments Regarding Cost-Effectiveness are Erroneous

ORA contends that the Agreement is not "cost-effective" and therefore "cannot" be approved by the Commission.⁴ Notwithstanding this assertion, ORA recognizes that "*there is no standard mechanism to determine cost-effectiveness*",⁵ and that Investor Owned Utilities ("IOUs") are granted "wide latitude"⁶ in determining the costs and benefits of an energy storage project's addition to a utility's portfolio.

ORA appears to base its conclusions, as far as Stem can tell, on assessments of where the Agreement falls on PG&E's *shortlist* of the top 8 contracts in all categories (out of *over 230* bids received⁷) that were ultimately selected for PG&E's final consideration. ORA's reasoning is clearly flawed because it ignores the cost-effectiveness considerations that went into compiling this shortlist in the first place, and further ignores the distinctions between the categories of Energy Storage ("ES") contracts that were solicited.

⁴ ORA Opening Brief, p. 4.

⁵ ORA Opening Brief, p. 5 (emphasis added).

⁶ D.14-10-045, *Application of San Diego Gas & Electric Company (U902M) for Approval of its Energy Storage Procurement Framework and Program as Required by Decision 13-10-040, and Related Matters*, dated October 16, 2014 ("D.14-10-045"), p. 69 (acknowledging and reaffirming the "wide latitude" that D.13-10-040 gives IOUs in adopting a Consistent Evaluation Protocol (CEP) which is used to assess an energy storage project's costs and benefits for the utility).

⁷ *Opening Brief of Pacific Gas and Electric Company (U 39 E)*, dated September 23, 2016 ("PG&E Opening Brief"), p. 5.

1. The Agreement's Ranking within PG&E's Total Shortlist is Not the Relevant Benchmark

As stated above, PG&E reviewed over 230 bids under its ES RFO, and culled these offers into a shortlist representing the top contenders. PG&E further refined this shortlist into three categories: transmission, distribution and behind-the-meter ("BTM") projects.⁸

Where this Agreement falls within PG&E's final shortlist is beside the point. Presumably all projects that made PG&E's shortlist were viewed as cost-effective for what they provide and, likely for varying reasons, are beneficial to PG&E's customers. It appears to be ORA's position that only projects that are ranked highest on this composite shortlist should be approved, but this position is a clear—and mistaken—oversimplification of the review and analysis that goes into compiling the shortlist. For example, ORA's position ignores the diverse metrics that comprise an overall evaluation of the various projects, and while PG&E's ultimate selection may not rank first on a single metric basis, it might otherwise compel contracting based on other factors not reflected by shortlist ranking.

In fact, on any shortlist some projects will rank higher than others, and in creating a shortlist the key question is where the cutoff point should be drawn. PG&E, with the assistance of its IE and the input of its Procurement Review Group, determined a shortlist of projects that it needs to fulfill Commission and State mandates. ORA is now attempting to further truncate PG&E's shortlist based on its own undisclosed cutoff point. Is it ORA's position that a third or more of the projects on the shortlist should be discarded because they rank lower than the others? If ORA were to apply its position universally, then in every solicitation PG&E would have to negotiate with 25% or 33% more projects than it needed just to ensure that it ends up with the right number at the end. This defeats the concept of a shortlist and would be a waste of utility and developer resources.

Moreover, even if the shortlist ranking were deemed probative, Stem ranked above the purchase and sale agreements ("PSAs") that were subsequently rejected in D.16-09-

⁸ PG&E Opening Brief, p. 6.

004. But it must also be stressed that, the Old Kearney and Mendocino PSAs were rejected on more than cost-effectiveness grounds. They were rejected, in part, because the projects were unable to come online when needed.⁹ In effect, these PSAs were shown incapable of doing what they were procured to do. This is not the case for Stem and no one has argued that point.

2. Cost-Effectiveness is Determined by PG&E's Total Metrics and Should not be Viewed Narrowly

ORA relies on a very narrow definition of the term “cost effectiveness” while recognizing that the term has not been defined in a way that supports ORA’s limited reading. According to ORA, PG&E gave no net plus in its portfolio adjusted value (“PAV”) to customer owned BTM projects.¹⁰ This is likely because PG&E measured BTM proposals against each other and not against the projects that fell into any of the other categories that the Commission directed IOUs to pursue in their ES RFOs. For all the reasons stated in Stem’s opening brief, BTM projects cannot be compared with transmission/distribution projects.

Further, while ORA acknowledges that cost-effectiveness must include a cost containment strategy,¹¹ it fails to note that this Agreement has an innovative, perhaps first-of-its-kind, cost-containment strategy that enables PG&E’s customers to save more as prices rise. As explained in our Opening Brief, because the four *highest-priced hours* are subtracted from the capacity price, PG&E customers actually save more as energy prices go higher.¹²

⁹ D.16-09-004, *Application of Southern California Edison Company (U338E) for Approval of Contracts Resulting From Its 2014 Energy Storage Request for Offers (ES RFO), And Related Matter*, dated September 15, 2016 (“D.16-09-004”), p. 13.

¹⁰ ORA Opening Brief, pp. 8-10.

¹¹ ORA Opening Brief, pp. 4-5.

¹² *Opening Brief of Stem, Inc.*, dated September 23, 2016 (“Stem Opening Brief”), p. 8.

B. ORA's Contentions Regarding Resource Adequacy are Shortsighted and Detrimental to State Interests

ORA contends that the Agreement is not “critical” to meeting PG&E’s RA requirement.¹³ This argument is unavailing and would unfairly exclude *any* small project from beneficial consideration in an IOU’s RA requirement. It is also inaccurate.

The Commission’s RA requirements are intended to view, and provide stability within, a utility’s *complete* portfolio.¹⁴ No singular project could carry the utility’s entire RA obligation nor would reliance on a very few projects to provide RA be a reasonable policy. Each RA component project, regardless of size, should accordingly be recognized for its role in the bigger picture.

Additionally, ORA ignores the fact that an important source of BTM RA—namely, projects with back-up generation (“BUGs”)—will soon be phased out entirely and require reliable BTM replacement.¹⁵ ES projects such as those provided in this Agreement can provide the necessary, reliable, replacement technology in time to prevent the BUG phase-out from affecting overall system reliability.

¹³ ORA Opening Brief, p. 18.

¹⁴ D.12-04-045, *Application of Pacific Gas and Electric Company (U39E) for Approval of Demand Response Programs, Pilots and Budgets for 2012-2014, And Related Matters*, dated April 19, 2012, pp. 7-8.

¹⁵ D.16-09-056, *Order Instituting Rulemaking to Enhance the Role of Demand Response in Meeting the State’s Resource Planning Needs and Operational Requirements*, dated September 29, 2016, pp. 19-26, 94-96, Ordering ¶¶ 1-4; *see also* D.15-11-041, *Application of Southern California Edison Company (U 338-E) for Approval of the Results of Its 2013 Local Capacity Requirements Request for Offers for the Western Los Angeles Basin*, dated November 19, 2015, pp. 15 (noting that “For over a decade the Commission has repeatedly defined Demand Response as not including the use of fossil-fueled backup generation” and that such use is “antithetical” to State and Commission policies) ; *id.* at 16 (“...the Commission’s policy is clear: the use of fossil-fueled BTM generation does not constitute Demand Response. While certain questions of definition and enforcement remain open and under review in R.13-09-011, we conclude that insofar as the NRG contracts in question rely on fossil-fueled BTM generation, they do not constitute Demand Response”); Resolution E-4728, *Approval with Modifications to the Joint Utility Proposal for a Demand Response Auction Mechanism Pilot Pursuant to Ordering Paragraph 5 of Decision 14-12-024*, dated July 23, 2015, pp. 14-15 (disallowing the inclusion of fossil-fueled BUGs in the DRAM pilot program on policy grounds).

C. The Agreement is Not a Demonstration Project

ORA also contends that the Commission “cannot” approve the contract on grounds that it will provide valuable lessons and technology diversity for PG&E.¹⁶ Again, such arguments miss the totality of the picture and the overall benefits of the Agreement.

As explained in the Opening Brief of Stem, the Agreement is a commercial relationship using existing and developing resources—resources which are funded and owned by private parties and *not* ratepayers—that meet State policies to develop energy storage (particularly BTM ES). The Agreement has a relatively short term, and provides both RA benefits and cost controls that benefit PG&E, its ratepayers and the State. ORA ignores, in large part, each of these benefits.

Furthermore, simply because this commercial arrangement offers significant learning opportunities does not mean that the project is better suited as a demonstration project. If chosen wisely, all procurement projects should prove instructive for IOUs and their customers. Under ORA’s faulty logic, additional educational benefits compel otherwise viable, *commercial* projects using advanced clean technology to only be approved and implemented as demonstration projects. Experience and policy compels the opposite.

Moreover, this Agreement does not fit the accepted definition of a demonstration project. Demonstration projects are employed on a limited basis strictly for the purpose of testing developing technology on a “pre-commercial” basis.¹⁷ Stem clearly does not fall into this category as it already has facilities on a commercial scale, with over 200 project successes, and is prepared to provide the services in the Agreement is less than a year.

¹⁶ ORA Opening Brief, pp. 15-18.

¹⁷ D.92251, *PG&E Co., SDG&E Co., So Cal Edison Co. and SoCal Gas Co. Ordered to Implement Demonstration Solar Financing Programs and Authorized to Incur Expenses of \$500,000 for Pre-Program Preparatory Work*, 1980 Cal. PUC LEXIS 1189 (“D.92251, 1980 Cal. PUC LEXIS 1189”), *13.

D. The Commission Must Provide Greater Clarity to Facilitate ES Contract Approval and Procurement Pursuant to IOU Targets

Finally, if the Commission adopts the position of ORA, the Commission must in its decision provide clearer standards for the type of Energy Storage contracts it is willing to approve; and allow Stem and PG&E to negotiate this Agreement to meet those newly provided metrics. The ES industry cannot sustainably continue to expend significant time and money procuring, reviewing and negotiating contracts and developing new technology projects only to be later deemed unacceptable under previously unknown or vague Commission standards. The Commission has already rejected several ES contracts and, if this Agreement is rejected, PG&E will fall short of its Commission-mandated procurement targets and the ES industry will be dealt a severe blow.

Such an outcome is neither desirable, necessary, or prudent. The Stem contract offers significant ratepayer benefits, as detailed above and as determined by PG&E after its thorough RFO and its process of review, contract negotiation and consideration by a qualified Independent Evaluator.

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III. CONCLUSION

For the foregoing reasons, Stem respectfully requests that the Commission issue a decision in this proceeding that approves the Agreement. Stem also requests that the Commission issue that decision expeditiously, but no later than December 15, 2016, so that it may effectively carry out its obligations under the Agreement.

Dated: October 7, 2016

Respectfully submitted on behalf of Stem, Inc.,

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